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ABSTRACT

This paper proposes that resultative verb-particle constructions (VPCs) have an underlyingly different structure from idiomatic VPCs; both structures differ from the Small Clause analysis of R. Kayne (1985) et al and the verb-particle complex analysis of K. Johnson (1991). Empirical support for the new proposal comes from anaphor deletion facts and coordination facts. The analysis also accounts for previously noted data involving VPCs. It is concluded that there is a structural distinction between resultative VPCs and idiomatic ones; the empirical facts of anaphor-deletion and coordinated particles motivate this distinction. Two underlying structures result from this analysis that make the correct semantic and syntactic distinction between the two, English VPC types that enjoy empirical advantages over both the Small Clause analysis and the V-Prt-NP analysis. (Contains 14 references.) (Author/NAV)

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ENGLISH VERB-PARTICLE CONSTRUCTIONS: TWO TYPES, TWO STRUCTURES

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ED 396 544

Abstract: This paper proposes that resultative verb-particle constructions (VPCs) have an underlyingly different structure from idiomatic VPCs; both structures differ from the Small Clause analysis of Kayne (1985) et al and the verb-particle complex analysis of Johnson (1991). Empirical support for the new proposal comes from anaphor deletion facts and coordination facts. The analysis also accounts for previously noted data involving VPCs.

1. Introduction

So-called verb-particle constructions (VPCs) in English have attracted a fair amount of attention in the literature. Many VPCs allow for a word order of either V-NP-Prt or V-Prt-NP. The forms in (1) and (2) demonstrate this:

(1)	a.	Robin sent the man away	Robin sent away the man
	b.	Kim let the dogs out	Kim let out the dogs
	c.	Pat knocked Terry down	Pat knocked down Terry
(2)	a.	Robin shut the dogs up	Robin shut up the dogs
	b.	Kim cleaned Terry up	Kim cleaned up Terry
	c.	Kim straightened Pat up	Kim straightened up Pat

In the standard analysis (Kayne (1985), Aarts (1989), etc.), the particle stands as an intransitive preposition (though we will use the term particle for expository ease); the forms in the left-hand columns in (1) and (2) reflect the underlying order of terms.[1] Kayne proposes a Small Clause analysis for such forms; so that the relevant portions of (1a) and (2a) have the underlying structure as shown respectively below (it matters not for present purposes whether the particle heads a PP or merely stands as a P°):

(3) a. [V' sent [SC the man [P away]]]
b. [V' shut [SC the dogs [P up]]]

However, notice that the forms of (1) and (2) have an important semantic distinction, which the literature has long noted. In each of the

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examples in (1), the particle indicates a resultative state. For example, in (1a) the particle *away* indicates the man's state resulting from Robin's act of sending. Similarly, in (1b) *out* tells us the resulting state of the dogs, and in (1c) *down* informs us of Terry's state as a result of the act of knocking. Call, then, VPCs such as those in (1) resultative.

In contrast, the particles in (2) indicate no such resultative state. In (2a), *up* in no way represents the resulting condition of the dogs. Similarly, in (2b) and (2c), we do not find Terry *up* or Pat *up* in any meaningful sense. Call VPCs such as those in (2), then, idiomatic.[2]

The fact that resultative VPCs and idiomatic VPCs have differing semantics suggests that they have underlyingly different syntactic structures as well, and that the standard view errs in treating all VPCs equally. It turns out that the two types of VPCs also differ syntactically in two previously unnoticed ways; they differ with regards to the optionality of anaphor deletion, and with regards to the admissibility of particle coordination. We consider each of these syntactic phenomena in turn, and then offer a syntactic analysis for the two types of VPCs that successfully accounts for the differences.

2. VPCs and Anaphor Deletion

Both resultative and idiomatic VPCs allow for the possibility of an anaphor in direct object position:

(4) a. Robin sent herself away
b. Kim let himself out
c. Pat knocked herself out

(5) a. Robin shut herself up
b. Kim cleaned himself up
c. Terry straightened herself up

An important fact, though, seems to have escaped notice in the literature. Namely, deletion of the anaphor from the resultative VPCs of (4) makes them ungrammatical, while idiomatic VPCs freely permit the anaphor to delete:

(6) a. *Robin sent away
b. *Kim let out
c. *Pat knocked out

(7) a. Robin shut up
b. Kim cleaned up
c. Terry straightened up

The forms in (6) all clearly fail under the intended reading; if anything, however, the forms in (7) sound even more natural than do their counterparts in (5). The same fact holds in imperative constructions; the resultative VPCs in (8) resist anaphor-deletion while the idiomatic VPCs in (9) do not:

(8)	a.	(You) send yourself away!	*Send away!
	b.	Let yourself out!	*Let out!
	c.	Knock yourself out!	*Knock out!
(9)	a.	(You) shut yourself up!	Shut up!
	b.	Clean yourself up!	Clean up!
	c.	Straighten yourself up!	Straighten up!

The contrast between the forms (6) and (7), and that between (8) and (9), offers strong evidence that resultative and idiomatic VPCs have distinct structures. Had the two types an identical structure, nothing would predict the possible absence of an anaphor in idiomatic VPCs without expecting such deletability in resultative VPCs as well. Crucially, then, the object NP of each construction must occupy an underlyingly different position.

3. VPCs and Particle Coordination

The syntactic literature has long assumed that particles in VPCs may not coordinate. Gleitman (1965: 264) gives the following as evidence of this:

(10) a. I washed the floors up
b. I washed the floors down
c. *I washed the floors up and down

(10c) does in fact fail. Interestingly, the forms in (10a) and (10b) give examples of idiomatic rather than resultative VPCs. The floors do not result in an *up* or *down* state from the act of washing; rather, the strings *wash up* and *wash down* provide two idiomatic ways to say 'wash thoroughly'. The ungrammaticality of (10c) does not result from the redundancy of these idiomatic readings; other particle coordinations in idiomatic VPCs tend to sound even worse:

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(11) *shut up* = 'make quiet'; *shut out* = 'allow no runs to'
a. Hideo Nomo shut those nasty Giants up
b. Hideo Nomo shut those nasty Giants out
c. *Hideo Nomo shut those nasty Giants [up and out]

(12) *put up* = 'provide lodging for'; *put out* = 'inconvenience'
a. Did the millionaire put the beggar up yesterday?
b. Did the millionaire put the beggar out yesterday?
c. *Did the millionaire put the beggar [up or out] yesterday?

Although both (11c) and (12c) conceivably make perfect sense, they fail on syntactic grounds. However, in contrast to the idiomatic VPCs above, resultative VPCs can have particles coordinate felicitously. Consider the following examples:

(13) a. I let the dogs in
b. I let the dogs out
c. I let the dogs [in and out]

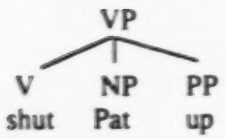
(14) a. Pat knocked Terry down
b. Pat knocked Terry out
c. Pat knocked Terry [down and out]

The grammaticality of forms such as (13c) and (14c) seems to have escaped mention in the literature. It provides important further evidence, though, for a syntactic distinction between idiomatic and resultative VPCs. Again, if both types of VPCs had the same structure, we would expect the two types to have equal grammaticality status in forms with conjoined particles. Instead, whereas the syntactic relationship between the verb and the particle precludes particle coordination in idiomatic VPCs, the V-Prt relationship in resultative VPCs does not.

4. Two Structures

As noted earlier, Kayne (1985) assumes all VPCs to have the same structure of [V [NP Prt]], where the NP and particle together form a type of Small Clause. The evidence in Sections 2 and 3, however, indicates that such an assumption errs. Aarts (1989) agrees that resultative VPCs (*A-verb* VPCs in his terms) have this SC structure. He argues that idiomatic VPCs such as *shut Pat up*, on the other hand, (*B-verb* VPCs for him) have a ternary structure as shown below[3]:

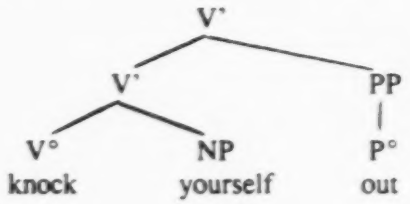
(15)



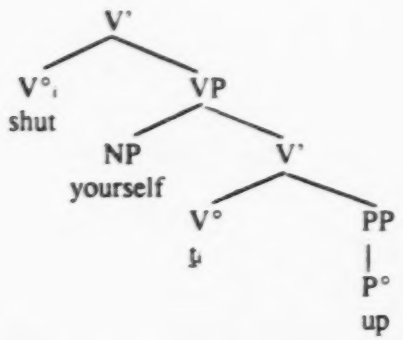
Standard theoretical assumptions, however (since Kayne (1984)), do not allow for such ternary branching. Although Aarts correctly divides resultative and idiomatic VPCs syntactically, the way in which he does so fails on theoretical grounds.

We propose that resultative and idiomatic VPCs have different structures in a way that respects the restriction to binary branching; it turns out that neither type has the Small Clause structure so commonly assumed. Specifically, we claim that resultative VPCs have a simple structure in which the intransitive particle stands external to a V-NP complex, while idiomatic VPCs actually consist of VP-shells, along the lines of Larson's (1988a) analysis. The relevant portion of the diagrams for the respective examples *knock yourself out* and *shut yourself up* follow:

(16) *Resultative VPC:*



(17) *Idiomatic VPC:*



In (16), the verb and direct object form a V' constituent. In (17), however, the verb in its original position forms a V' together with the particle. It then undergoes raising to the higher V° position within the shelled VP structure, so that it may assign Case to the NP *yourself* in the lower [Spec, VP] position.[4] Idiomatic VPCs, then, have essentially the same syntactic structure as do double-object constructions under a Larsonian

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analysis.

The two different structures above offer a plausible means of correct interpretation of the corresponding semantic readings. Recall that in a form such as *knock NP out*, the particle *out* depicts the state that results to the NP (here, *yourself*) as a consequence of the act of knocking. In (16), the particle *out* c-commands the V+NP; in a sense, then, it has 'resultative scope' over the unit comprised of the verb and NP. Contrast this to the structure in (17). Here, the particle underlyingly occupies the lowest position in the structure. It does not have any sort of 'resultative scope' over a V+NP complex; rather, it forms an idiom chunk together with the verb under sisterhood. Such idiom formation does not occur in the resultative VPCs because the particle does not stand as a sister of the verb. So the two different structures proposed here seem compatible with the two types of semantic interpretations.

More importantly, the two structures offer an explanation for the syntactic differences noted earlier. Recall that idiomatic VPCs allow for anaphor deletion, whereas resultative ones do not:

(18)	a.	Robin cleaned herself up	Robin cleaned up
	b.	(You) shut yourself up!	Shut up!
(19)	a.	Pat let herself out	*Pat let out
	b.	(You) knock yourself out!	*Knock out!

It turns out that whether or not an anaphor can delete in a VPC depends upon its structural position. Notice that under the present analysis, a direct object in an idiomatic VPC occupies a [Spec, VP] position, while in a resultative VPC the direct object fills [Comp, V°]:

(20)	a.	[$v°$ Verb$_i$ [VP DO [$v°$ t_i Prt]]]	Idiomatic
	b.	[$v°$[$v°$ Verb DO] Prt]	Resultative

This specifier-complement distinction with regards to the direct object immediately accounts for the deletability facts. English allows deletion of NPs that occupy a specifier position more readily than it allows deletion of NP complements. For example, imperatives constructions allow deletion of the subject 'you', though of course a complement of an imperative cannot delete:

(21)	a.	You shoot the dog!
	b.	Shoot the dog!

(22) a. You shoot yourself!
b. *You shoot!

Similarly, in casual conversation subject NPs, which occupy [Spec, IP], can delete given enough established context, but object NPs never can. So (23), with its deleted subjects, sounds fine, while (24) crashes entirely (parentheses enclose deleted material):

(23) Robin went to Alaska last year. (She/He) saw lots of bears. (She/He) climbed a few mountains, too. (She/He) really enjoyed that trip, yes sir.

(24) Robin bought that book last year. She read *(it) in two days. She didn't like *(it) very much. She ended up returning *(it).

Given all this, it should come as no surprise that only idiomatic VPCs can undergo anaphor deletion. In (21) and (23), we see that specifier NPs can delete given enough context. Precisely this type of specifier NP-deletion occurs in the forms in (18), as the following shows (again, parentheses enclose deleted material):

(25) a. [$_{VP}$ Robin$_1$ [$_{V'}$ cleaned$_i$ [$_{VP}$ (herself$_1$) [$_{V'}$ t$_i$ up]]]]
b. [$_{VP}$ You$_1$ [$_{V'}$ shut$_i$ [$_{VP}$ (yourself$_1$) [$_{V'}$ t$_i$ up]]]

In each case above, the (potentially phonetically null, in the case of the imperative) coindexed subject NP provides sufficient context to allow deletion of the anaphor.[5] Since the anaphors occupy specifier positions, they may in fact delete under identity on a par with the deleted NPs in (21) and (23).

It also follows directly that resultative VPCs will forbid anaphor deletion, regardless of established context, since the anaphors occupy a complement position and complements do not delete in English:

(26) a. [$_{VP}$ Pat$_1$ [$_{V'}$[$_{V'}$ let *(herself$_1$)] out]]]
b. [$_{VP}$ You$_1$ [$_{V'}$[$_{V'}$ knock *(yourself$_1$)] out]]]

So the differing structures proposed successfully account for the anaphor deletion facts. Likewise, it accounts for the coordination phenomena noted earlier; namely that resultative VPCs permit coordinated particles while idiomatic VPCs do not. Recall the basic structure proposed for resultative VPCs:

(27) [$_{V'}$[$_{V'}$ Verb NP] Particle]]

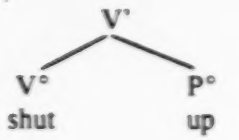
The verb and NP form a unit together; the external particle depicts the resulting state of the effect of the particular verb on the NP. It stands to reason that more than one resulting state can come about from a single action to a given object; for example, Pat can knock Terry both down and out (cold) with a single blow. Also, one can reverse the result of one's action; hence the grammaticality of strings such as *let the dogs in and out*. The basic idea of the structure in (27) can in fact apply to cases with coordinated particles. Assume along with, among others, Rothstein (1991), Munn (1992) and Zoerner (1995) that a coordinating conjunction &° heads its own phrase &P. A resultative VPC with coordinated particles thus appears as:

(28) [v'[v' Verb NP] [&P Particle and Particle]]]

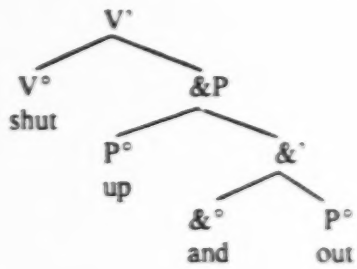
As long as both particles depict results of the verb's effect on the NP, the form will prove grammatical, just as desired.[6]

However, the differing structure of idiomatic VPCs accounts for the fact that these VPCs prohibit coordinated particles. Contrast for example, the relevant portion of an idiomatic VPC with a single particle against one with conjoined particles, assuming an &P-analysis (diagrams simplified somewhat):

(29) a.



b.



In (29a), the particle fills [Comp, V°]. In (29b), however, neither particle, strictly speaking, stands as a sister of the verb; rather, the entire coordination does. Grant now the following reasonable hypothesis:

(30) Only terms which underlyingly mutually c-command each other may create idiom chunks.

Since the particles of (29b) do not stand as V°-sisters, according to the hypothesis in (30) neither one will form an idiom chunk with a verb. Hence follows the illformedness of sentences such as **Hideo Nomo shut those nasty Giants up and out*; from its base-generated position the verb fails to form an idiom chunk with either particle (and the coordination of particles does not

create a meaningful part of an idiom chunk itself).

This approach implies that similar attempts to create coordinated idiom chunks will fail; the facts seem to bear this out. Consider the following:

(31) *throw to the wolves*: 'place in a difficult situation'; *throw for a loop*: 'confuse'

a. Robin threw Kim to the wolves
b. Robin threw Kim for a loop
c. *Robin threw Kim [&P to the wolves and for a loop]

(32) *take a dive*: 'deliberately lose'; *take a breather*: 'rest'

a. Robin took a dive yesterday
b. Robin took a breather yesterday
c. *Robin took [&P a dive and a breather] yesterday

Although the (c) forms above have conceivable, pragmatically felicitous readings, they both fail because the verb cannot form an idiom chunk with the relevant PPs or NPs. The analysis of idiomatic VPCs resulting from underlying sisterhood between the verb and the particle, then, has the virtue of predicting the inadmissibility of coordinating particles and unifying idiomatic VPCs with other idiomatic constructions.

5. Comparisons with Previous Analyses of VPCs

The present proposal of VPC structures has two main competitors; the Small Clause Analysis as in Kayne (1985) and the Verb-Particle complex analysis as in Johnson (1991). We consider each competitor in turn, and show that the present analysis holds empirical advantages over both.

Take first the common claim that all VPCs form Small Clauses. Under this idea, both a resultative VPC and an idiomatic one pattern on a par with the form in (33a) below:

(33) a. Robin considers [sc Kim smart]
b. Robin knocked [sc Kim out]
c. Robin shut [sc Kim up]

This analysis suggests that particles such as *out* and *in* form the same kind of predicates that *smart* does in (33a). In this section, we show that the present analysis can account for the same set of facts that motivates the SC analysis. We also show that the SC analysis fails empirically on other grounds. It cannot capture either the anaphor-deletion or the particle-

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coordination data inspected previously; it also makes faulty predictions involving the constituency of the NP+Particle string.

The SC analysis does have some nice empirical consequences, but the present analysis can arrive at the same consequences without too much difficulty. For example, Aarts (1989: 280) notes that an NP+Particle sequence can occur in certain comparative structures:

(34) *The oven off* is less dangerous than *the oven on*.

Aarts takes this as evidence of constituency for the NP+Particle string; precisely the constituency an SC analysis provides. However, it seems just as likely that the above sentence has the underlying form of (35):

(35) The oven turned off is less dangerous than the oven turned on.

Since both occurrences of the verb 'turned' fall out as completely predictable under context (one does not, for example, normally *hammer* an oven off), they may delete. The grammaticality of (34), then, does not necessarily give independent evidence for the existence of an SC.

Aarts (1989: 282) also offers coordination data which purportedly supports an SC analysis. However, it turns out that an alternative can handle the data too:

(36) a. He switched the lights on and the radio off
b. He switched [&P [sc the lights on] and [sc the radio off]]
c. [He switched the lights on] and [(he switched) the radio off]]

Aarts gives (36a) as evidence for the SC-like constituency of the NP+Prt. (36b) shows the SC analysis; two SCs coordinate and the resulting &P stands as a sister to the V°. (36c) shows an alternative analysis; namely, the effects of Left Peripheral Deletion (see among others Sag (1976)), in which a subject and verb delete together under identity in a coordinate structure. There seems no a priori reason to prefer the depiction in (36b) over that in (36c); again, then, the argument in favor of the SC analysis loses force.

The previously noted anaphor-deletion facts, though, separate the two analyses. Small Clauses do not allow for deletion of their subjects, even under identity:

(37) a. Robin considers [sc *(herself) smart]
b. Kim found [sc *(himself) completely unprepared]

Therefore, idiomatic VPCs cannot have an SC structure, because they do in fact allow anaphor deletion: *Robin shut (herself) up*, and so on. Note too that SC structures allow for coordination of the predicate:

(38) a. Robin considers [sc Kim [AP very smart and extremely able]]
b. Kim found [sc the party [AP boring and unenjoyable]]

Again, this shows that idiomatic VPCs do not form SCs; recall **Nomo shut the Giants up and out* and its ilk. Under an SC analysis of idiomatic VPCs, the particle stands as the predicate and should therefore undergo coordination as freely as do the predicates in (38). The fact that such particle-coordination fails, though, shows that the SC analysis unifying all types of VPCs fails.

In fact, the claim that the NP and Particle form a constituent together (namely, SC) runs into general problems. As Gueron (1990) notes; the NP+Particle string may not undergo pied-piping, topicalization or clefting. Consider the following:

(39) *[Which dogs out] did Robin let t?
(cf. Which dogs did Robin let out?)

(40) *[The important package away], we sent already
(cf. The important package, we sent (it) away yesterday

(41) *It was [Douglas out] that Holyfield knocked
(cf. It was Douglas that Holyfield knocked out)

The illformedness of the above three forms suggests strongly that an object NP and a particle do not form a constituent together. Note that all three examples above involve resultative VPCs; it appears, then, that an analysis of VPCs along the lines of a SC analysis depicts neither idiomatic nor resultative VPCs accurately.

Johnson (1991) gives a different analysis of VPCs, but one that runs into trouble as well. He proposes that all VPCs have an underlying structure such as the following:

(42) [v [v Verb-Particle] NP]

In his analysis, the verb and particle form a complex verb together; the object NP stands as a sister to this complex. This analysis shows a similarity to the present analysis of idiomatic VPCs, where the verb and particle too form a constituent (which we take as V' rather than V, however). Interestingly, Johnson considers idiomatic VPCs such as *look up the reference* and *dust off the counter* in his work almost exclusively; however, he does seem to claim that all VPCs have the structure as shown in (42). Here we show that this claim fails; we also show that the structure in (42) does not even suffice to account for the idiomatic VPC data adequately.

Some of Johnson's argumentation for the constituency of V+Prt actually gives evidence for the type of structural distinction between VPC types proposed here:

(43) a. The calling out of his name is heart-wrenching
b. The pointing out that we should leave was timely

Johnson argues that *call out* acts as a single lexical item, since it undergoes a morphological process (*-ing* nominalization) that applies only to verbs in the lexicon. Note, though, that Johnson gives idiomatic examples above; similar constructions with resultative VPCs sound much worse:

(44) a. ??The letting out of the dogs bothered me
b. ??The knocking out of Terry shocked the audience

So the attempt to give a unified analysis of VPCs with V+Prt as a constituent does not work; specifically, it fails with regards to resultative VPCs. It also has problems with idiomatic VPCs. Consider again Johnson's proposed structure for an idiomatic VPC such as *look up the reference*:

(45) [V'[V look up] [NP the reference]]

Here, the direct object stands as the complement of the verbal complex. Nothing, then, predicts the deletability of an anaphor in such a position; we have seen that complement NPs generally resist deletion. Therefore, we conclude that the present analysis, which separates resultative and idiomatic VPCs structurally, enjoys the empirical advantages of the Small Clause analysis and Johnsonian analysis without falling prey to any of the pitfalls.

6. VPCs and Word Order

Recall the data from (1) and (2), repeated below; both resultative and idiomatic VPCs generally allow for a free word order between the NP and the

particle:

(46)	a.	Robin sent the man away	Robin sent away the man
	b.	Kim let the dogs out	Kim let out the dogs
	c.	Pat knocked Terry down	Pat knocked down Terry
(47)	a.	Robin shut the dogs up	Robin shut up the dogs
	b.	Kim cleaned Terry up	Kim cleaned up Terry
	c.	Kim straightened Pat up	Kim straightened up Pat

Any theory of VPCs faces the challenge of accounting for the variable word order above. In addition, the theory must explain the familiar fact that pronouns may not surface to the right of the particle in either kind of VPC:

(48)	a.	Robin knocked him down	*Robin knocked down him
	b.	Kim cleaned it up	*Kim cleaned up it

This section first equates the word order variability in resultative VPCs to the phenomenon of Heavy NP Shift (HNPS; we shall appeal to the analysis in Aarts (1989). It then shows that the facts fall out in idiomatic VPC cases by assuming that the verb-particle sequence undergoes reanalysis (in a sense similar to the analysis in Larson (1988b).

Under the present analysis, the NP of a VPC always precedes the Particle underlyingly: V-NP-Prt. Conceivably, the variant word order of V-Prt-NP could result either from leftward movement of the particle, or from rightward movement of the NP. Theory-internal reasons, however, preclude the first possibility in resultative VPCs. Recall the proposed underlying structure of resultative VPCs:

(49) [v'[v' Verb NP] Particle]

From its underlying position, the particle c-commands the verb-NP complex. Note, then, that leftward movement of the particle to a position within that complex (presumably creating an adjunction to the V° position, since terms do not adjoin to complements) will result in an unbound trace, in violation of the Proper Binding Condition. Instead, to create the alternative word order, the NP in (49) must undergo rightward movement.[7]

Aarts (1989: 286) gives an explicit example of the rightward-movement analysis. He offers a condition upon rightward movement which correctly captures the relevant facts of VPCs. He writes:

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(50) A maximal projection A may appear in an adjoined position after rightward movement across a maximal projection B only if A is more heavily weighted than B.
Weightings: heavy XP 2; regular XP 1; light XP 0

For Aarts, a heavy XP contains either a clause or a PP. Light XPs, on the other hand, contain only a head; pronouns, then, as well as lone particles fall under this rubric. All other XPs have a regular weighting of 1. Let us see Aarts' idea in action in a typical Heavy NP-Shift case:

(51) a. Robin read t_i yesterday [every book Kim ever wrote]$_i$
b. *Robin read t_i yesterday [books]$_i$

In the (a) form above, the extracted NP includes a clause and therefore has a weighting of 2. Since it outweighs the intervening AP 'yesterday' (which has a 1 weighting), the movement obeys the condition in (50) and the form goes through as good. In the (b) form above, though, the extracted NP 'books' counts as merely a regular XP with a weighting of 1. It therefore does not outweigh the AP and may not cross over it to the right. Aarts' condition therefore applies nicely to account for HNPS facts.

It also applies directly to VPCs. Consider:

(52) Robin knocked t_i [PP out] Kim$_i$

Here, the NP 'Kim' has a weighting of 1. The bracketed PP, however, consists of a bare particle only, and therefore has a weighting of 0. Since the moved element outweighs the intervening phrase, the rightward movement proves grammatical.

As Aarts notes, the analysis correctly predicts the inadmissability of extracting a pronoun. Consider:

(53) *Robin knocked t_i [PP out] him$_i$

Here, the moved phrase 'him' has a zero weighting. It does not outweigh the intervening PP, and therefore the movement fails. This analysis has a further benefit that Aarts does not consider. Recall the previous assumption that a coordinating conjunction heads its own phrase &P. A coordination of particles therefore appears as:

(54) [&P Particle [&' and Particle]]

The above depiction has an important consequence: a coordination of particles necessarily has a heavier weight than a lone particle does. The &P above has more than a bare head; rather, it has a specifier and complement as well, and therefore counts as a regular XP in Aarts' terms, with a weighting of 1. This consequence has immediate empirically desirable consequences. The previously unnoticed fact that coordinated particles must stand outside of the Verb-NP complex falls out directly under the analysis:

(55) a. Robin knocked Kim [&P down and out]
b. *Robin knocked t_i [&P down and out] Kim$_i$

The (a) form above shows the underlying word order; the (b) form shows rightward movement of the NP. Both the NP 'Kim' and the &P have weightings of 1; since the former does not outweigh the latter, the rightward movement fails. Note, though, that rightward movement of a heavy NP, which has a weighting of 2, sounds much better:

(56) Robin knocked t_i [&P down and out] [every pathetic stumblebum who dared enter the ring that night]$_i$

It seems that all of the possibilities of variant word order in resultative VPCs, then, fall out under a more general analysis of rightward movement.

Idiomatic VPCs also allow for variant word order; as noted, we find forms such as *Robin shut up the dogs* as well as *Robin shut the dogs up*. Under the present analysis, the latter reflects the underlying structure:

(57) [VP Robin [V' $\underline{e}$ [VP the dogs [V' shut up]]]]

We assume the VP-internal Subject Hypothesis; the subject NP 'Robin' occupies the [Spec, VP] position of the higher VP-shell. Since this NP needs Case, the verb raises to the underlyingly empty V°-slot as shown below:

(58) [VP Robin [V' shut$_i$ [VP the dogs [V' t_i up]]]]

From its new position, the verb assigns Case to the subject NP, as well as to the NP 'the dogs' in the lower [Spec, VP]; this Case-motivated movement brings about the standard V-NP-Prt word order.

Arriving at the variant word order of V-Prt-NP relies upon accepting a premise in Larson (1988b) (essentially the one that Johnson (1991) adopts): V'-constituents that constitute idiom chunks optionally may undergo reanalysis as V°s. Since a V' string such as 'shut up' in fact makes up an idiom chunk,

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the grammar may recognize it as a V°. Therefore, the entire idiom chunk may undergo movement as does the lone verb in (58):

(59) a. [VP Robin [V' ∅ [VP the dogs [V° shut up]]]]
b. [VP Robin [V' [V° shut up]$_i$ [VP the dogs t$_i$]]]]

The (a) diagram shows the reanalysis into a V°; (b) illustrates movement of this complex V° to the higher V°-slot. This movement, as before, has as its motivation the Case requirements of the NPs in the two [Spec, VP] positions. So although both resultative and idiomatic VPCs have variant word order, the variations come about through different means; idiomatic VPCs show reanalysis rather than rightward movement.

One question remains open, however; namely, why idiomatic VPCs do not allow the word order V-Prt-Pronoun. Recall forms such as:

(60) a. *Robin shut up him
b. *Robin cleaned up her

When the verb and particle undergo reanalysis, they may not raise over a pronoun. Something, then, precludes the following:

(61) *[VP Robin [V' [V° shut up]$_i$ [VP him t$_i$]]]]

Since the above involves leftward rather than rightward movement, we may not appeal to Aarts' condition on the weighting of moved constituents. We know that a reanalyzed V° can assign Case to a pronoun in a higher [Spec, VP]; note for example that in (59b) replacing the subject NP 'Robin' with the pronoun 'she' does not affect matters. The ungrammaticality of (61), then, must result from the failure of the reanalyzed verb to assign Case to the pronoun in the lower [Spec, VP]. For now we merely posit: object pronouns may not receive Case from a complex verb. Note that in English, pronouns but not other NPs (with the exception of *whom*) show overt Case. It therefore seems plausible to claim that manifestation of such overt Case on a pronoun requires assignment from a 'pure' V°; since other NPs show no overt Case, they need not care whether a pure V° or a complex one performs the Case-assignment. Though this account indeed remains stipulative, perhaps a better understanding of pronouns and Case will enable it to follow from prior principles.

7. Conclusion

We have demonstrated the necessity to show a structural distinction

between resultative VPCs and idiomatic ones; the empirical facts of anaphor-deletion and coordinated particles motivate this distinction. The two types of VPCs have the following underlying structures:

(62) a. [v'[v' Verb NP] Particle] *Resultative*
b. [v' ∈ [vP NP [v' Verb Particle]]] *Idiomatic*

The above structures make the correct semantic and syntactic distinction between the two VPC types, and enjoy empirical advantages over both the Small Clause analysis and the V-Prt-NP analysis. We have examined only English VPCs here; it should prove interesting to extend this analysis to other languages with VPCs as well (e.g. German, Norwegian, Dutch, etc.). The present analysis has gotten off to a promising start, and natural extensions of it to other languages should bear fruit as well.

NOTES

My thanks go to Terri Griffith, Yuji Takano and an anonymous reviewer for helpful discussion on this work.

[1] Johnson (1991) argues that the verb and the particle together form a complex verb; he proposes the following structure for all VPCs:

i. [v'[v Verb-Particle] NP]

We return to an assessment of this analysis in Section 5; for now we consider the Small Clause analysis only.

[2] As an anonymous reviewer correctly notes, the resultative/idiomatic distinction blurs in some VPCs. For example, *knock out* has two possible interpretations: 1) to knock someone to make that person out (cold), and 2) to amaze. In this work we consider the resultative reading of (1) only. Similarly, *straighten up* can mean either: 1) align or 2) fix. Here we work with only the second, idiomatic reading. The ambiguity of some VPCs poses a problem for any analysis; one which we leave unresolved here. For now we simply appeal to the intuitive distinction between the idiomatic/resultative readings, and hope that a more precise definition will follow.

[3] Aarts' motivation for separating resultative and idiomatic VPCs differs from the motivation regarding anaphors and particle-coordination discussed here. We return to Aarts' analysis in Section 5.

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[4] From its raised position, the verb will also assign appropriate Case to the subject NP in the higher [Spec, VP] position (not shown in the diagram).

[5] As noted, forms of this type sound most natural when the anaphor does delete. This may result from a general discourse condition along the lines of "avoid prolixity;" we may remain neutral on this issue, noting in any event that the present analysis succeeds in predicting the admissibility of such deletion.

[6] An anonymous reviewer correctly points out that *let the dogs in and out* has a distributed reading, one in which for example one dog comes in while another goes out (perhaps from a single act of opening a door). The present analysis has no means of accounting for this interesting fact. To the best of our knowledge, other analyses fare no better.

[7] This paper works under the assumption that Kayne's (1994) theory-driven claims against the existence of rightward movement prove too strong; we hold that empirical matters require that we maintain the possibility of rightward movement. Justification of such a position, however, would lead too far afield here.

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